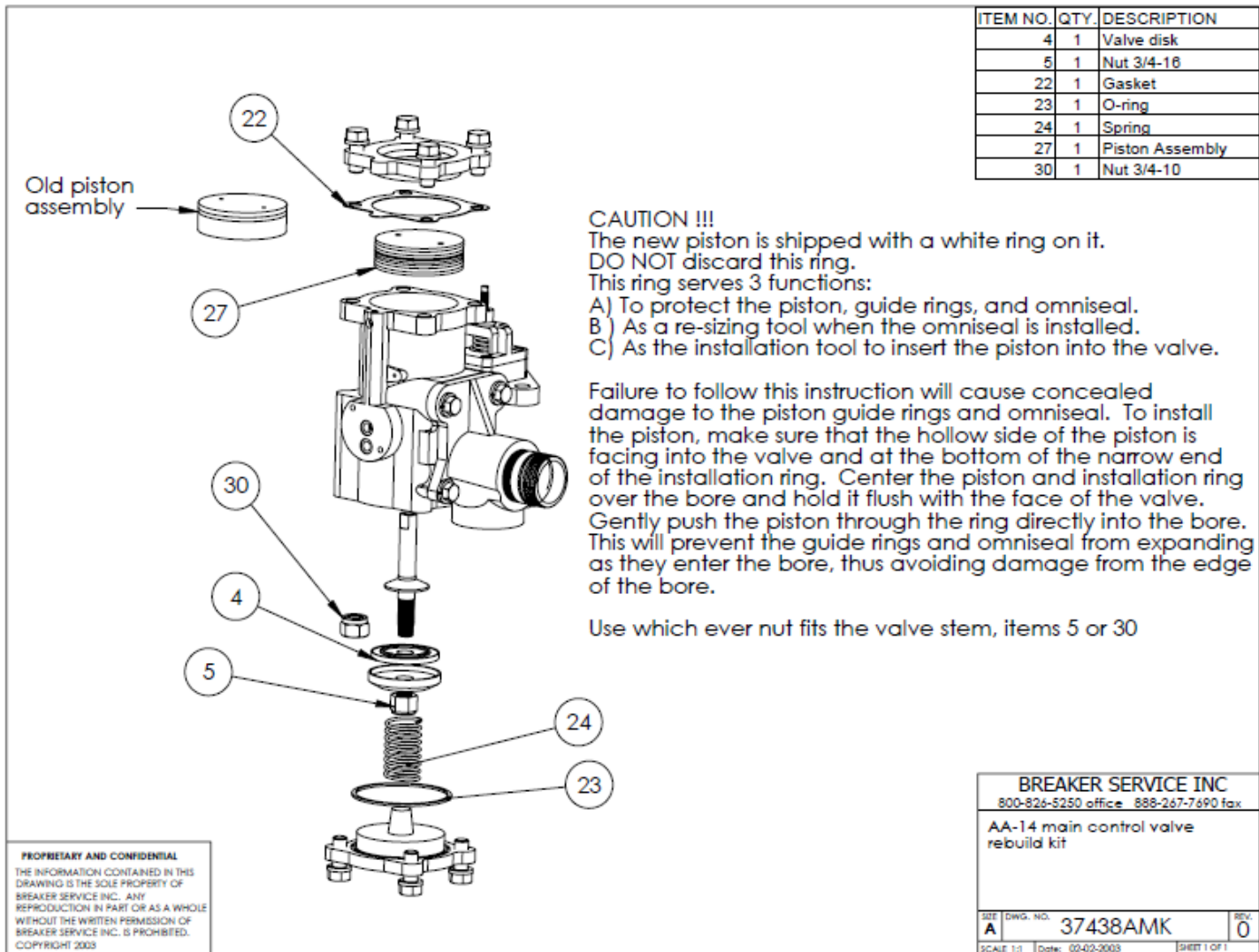




AA-14

MECHANISM



ITEM NO.	QTY.	DESCRIPTION
4	1	Valve disk
5	1	Nut 3/4-16
22	1	Gasket
23	1	O-ring
24	1	Spring
27	1	Piston Assembly
30	1	Nut 3/4-10

CAUTION !!!
 The new piston is shipped with a white ring on it.
 DO NOT discard this ring.
 This ring serves 3 functions:
 A) To protect the piston, guide rings, and omniseal.
 B) As a re-sizing tool when the omniseal is installed.
 C) As the installation tool to insert the piston into the valve.

Failure to follow this instruction will cause concealed damage to the piston guide rings and omniseal. To install the piston, make sure that the hollow side of the piston is facing into the valve and at the bottom of the narrow end of the installation ring. Center the piston and installation ring over the bore and hold it flush with the face of the valve. Gently push the piston through the ring directly into the bore. This will prevent the guide rings and omniseal from expanding as they enter the bore, thus avoiding damage from the edge of the bore.

Use which ever nut fits the valve stem, items 5 or 30

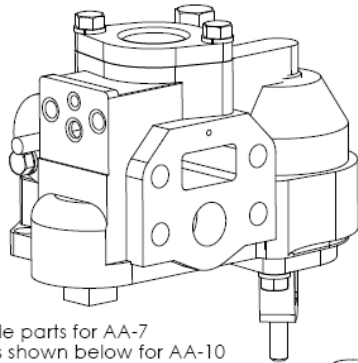
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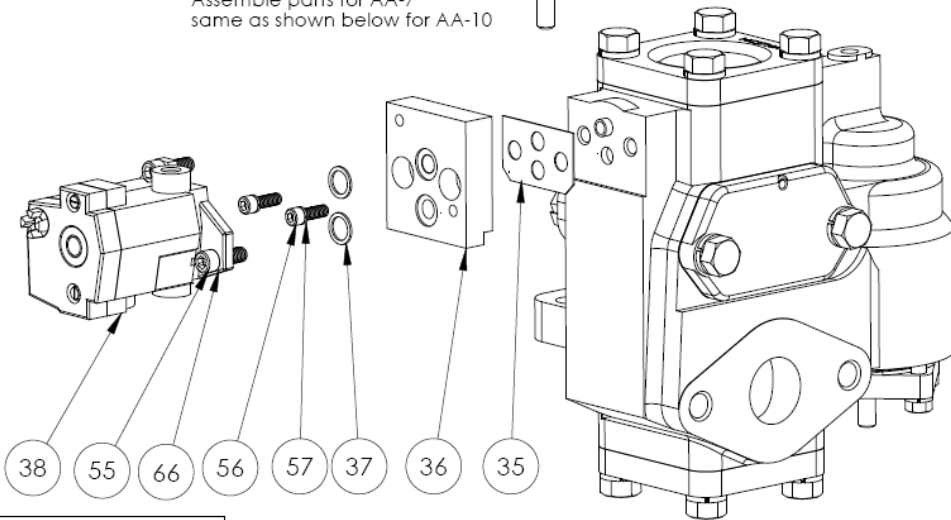
AA-14 main control valve
 rebuild kit

SIZE DWG. NO. 37438AMK REV. 0
 SCALE 1:1 Date: 02-02-2003 SHEET 1 OF 1

Westinghouse AA-7 main control valve



Assemble parts for AA-7
same as shown below for AA-10



Westinghouse AA-10 main control valve

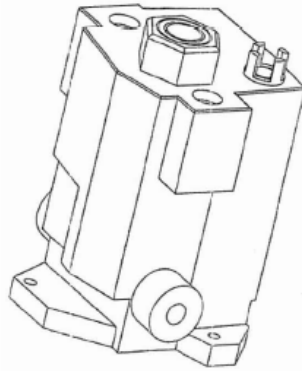
Item No	BSI part #	Description	Qty
35	30525/37131AMK	gasket	1
36	37990AMK	adapter	1
37	2112470/37124AMK	o-ring	2
38	37450AMK	Ross pilot valve	1
55	37134AMK	socket head cap screw, 1/4-20 x 1"	2
56	38596AMK	socket head cap screw, 3/8-16 x 1"	2
57	37144AMK	lock washer, 3/8"	2
66	37145AMK	lock washer, 1/4"	2

Notes:

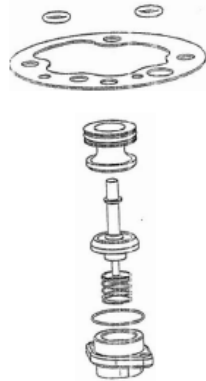
1. Always time the breaker before (if possible) and after replacing the pilot valve to ensure proper closing speed.
2. This kit is for use on the mechanisms listed below that are used on oil circuit breakers and the Westinghouse model 2300SF GCB.
3. If replacing a Norgren pilot valve with an external pilot pressure feed into port "P" on the old Norgren pilot valve, remove and discard the pipe plug from port "X1" on the new Ross pilot valve and connect the external pilot pressure tubing to the port on the Ross pilot valve marked "X1". The port on the Ross pilot valve marked "Y3" is the pilot exhaust and should always remain unplugged.

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BREAKER SERVICE INC			
800-826-5250 office 888-267-7690 fax			
Kit to replace the Westinghouse "magnet valve" pilot valve or Norgren D0035A pilot valve on AA-7, AA-10, & AA-14 W.H. main control valves with a Ross pilot valve - see notes for limitations			
SIZE A	DWG. NO. 37993AMK	REV. 4	
SCALE: 1:3	Date: 02-18-2005	SHEET 1 OF 1	



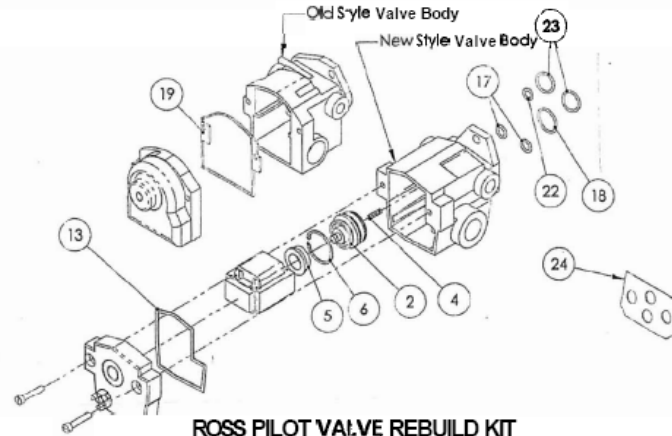
ROSS PILOT
BSI PART 37450AMK



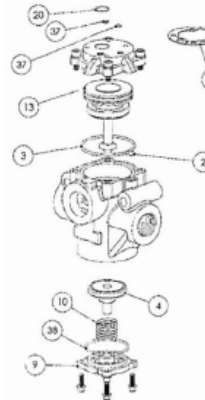
1/4, 3/8 & 1/2
BSI 37887AMK

ROSS MAIN CONTROL VALVE REPAIR KIT
1/2, 3/4 & 1
BSI 37169AMK

INCLUDES QTY 1 EACH:
37450AMK, K12274, 37887AMK, 37169AMK & 37882AMK



ROSS PILOT VALVE REBUILD KIT
BSI KIT K12274



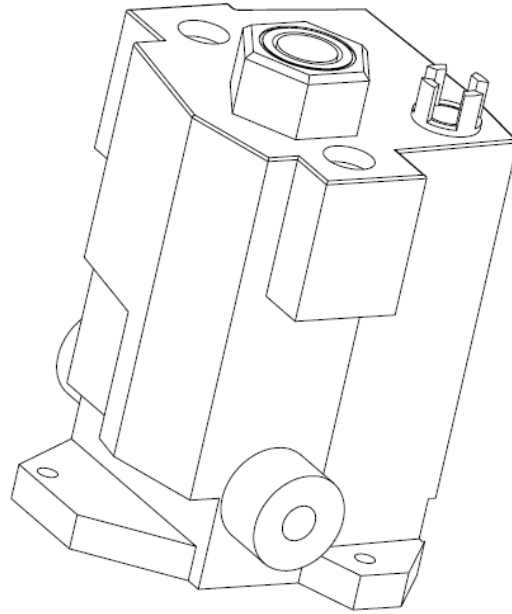
1-1/4 & 1-1/2
BSI 37882AMK

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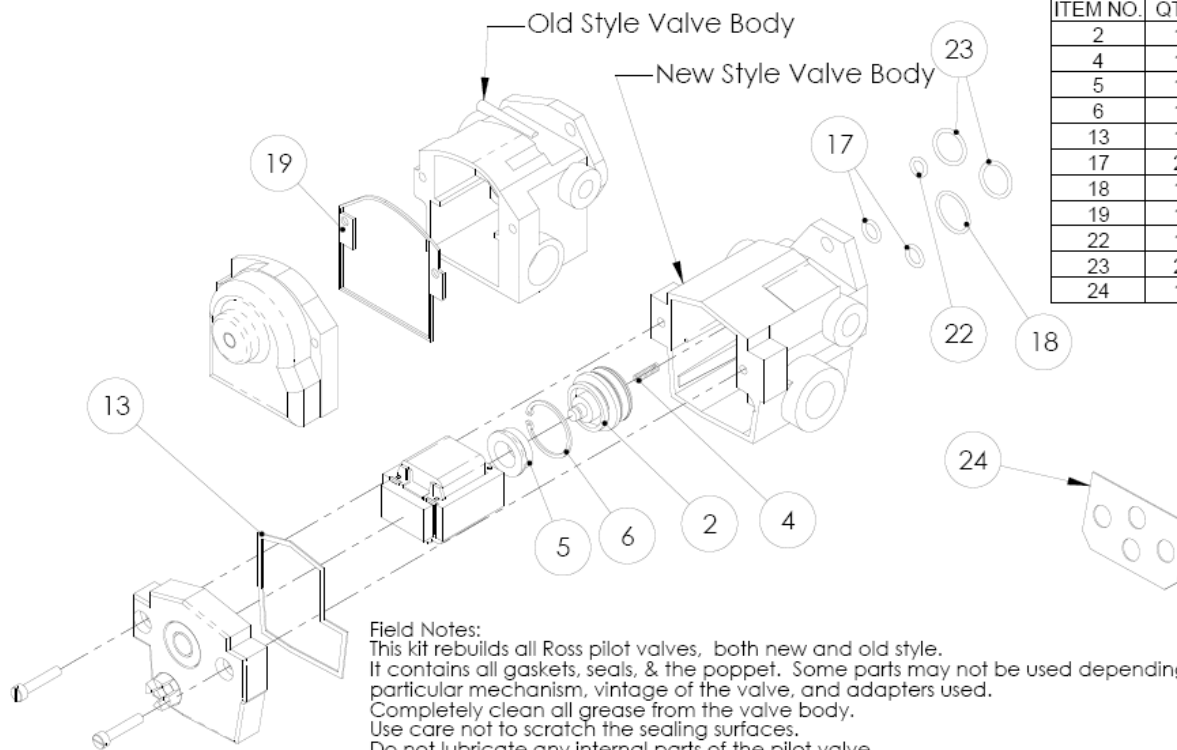
ROSS VALVE FIRST AID KIT
REPAIRS ALL ROSS MAIN & PILOT VALVES

SIZE A	DWG. NO. 38275AMK	REV. 0
SCALE: NTS	Date:	SHEET 1 OF 1



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BREAKER SERVICE INC		
800-826-5250 office 888-267-7690 fax		
Ross Pilot Valve with coil for 125vdc operation		
SIZE A	DWG. NO. 37450AMK	REV. 0
SCALE:1:1	Date: 02-02-2002	SHEET 1 OF 1



ITEM NO.	QTY.	DESCRIPTION
2	1	poppet assembly
4	1	spring
5	1	bumper
6	1	retaining ring
13	1	new style cover gasket
17	2	o-ring
18	1	o-ring
19	1	old style cover gasket
22	1	o-ring
23	2	o-ring
24	1	gasket

Field Notes:

This kit rebuilds all Ross pilot valves, both new and old style. It contains all gaskets, seals, & the poppet. Some parts may not be used depending on the particular mechanism, vintage of the valve, and adapters used.

Completely clean all grease from the valve body.

Use care not to scratch the sealing surfaces.

Do not lubricate any internal parts of the pilot valve.

There should be only one spring in the pilot valve - it is located under the poppet as shown in the drawing.

If the sealing surfaces are scored, then the valve must be replaced.

Time the breaker before (if possible) and after rebuilding the pilot valve.

Use item 23 & 24 for the Westinghouse style main control valve with adapter block.

Use items 17 for Ross main valves with ports 1" & smaller

Use items 18 & 22 for Ross main valves with ports larger than 1"

The internal parts (items 2, 4, 5, & 6) are the same for the old & new style pilot valve bodies, but not illustrated above for the old style valve body.

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BREAKER SERVICE INC		
800-826-5250 office 888-267-7690 fax		
Ross pilot valve rebuild kit		
SIZE A	DWG. NO. 12274	REV. 6
SCALE: 1:2.5 Date: 09-02-2003		SHEET 1 OF 1

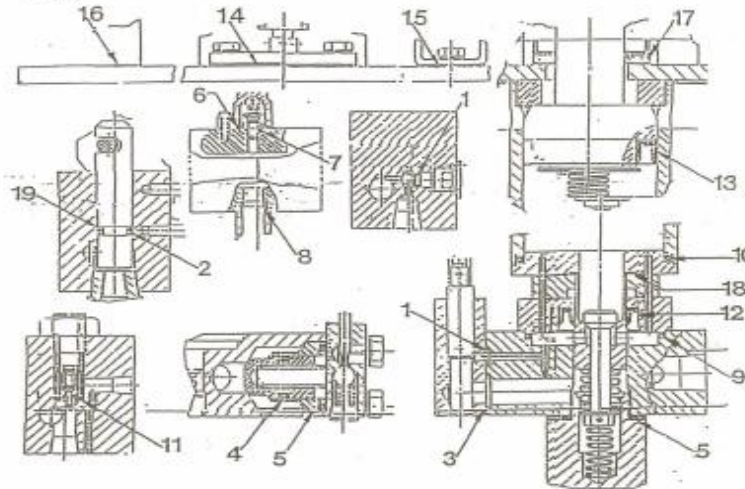


McGRAW EDISON
OA-3 MECHANISM

PARTS NUMBERS ARE FOR REFERENCE ONLY. WE DO NOT IMPLY THAT ANY OF THESE PARTS WERE SUPPLIED BY, OR WERE APPROVED BY THE ORIGINAL EQUIPMENT MANUFACTURER. MCGRAW EDISON

REF	QTY	PART	REPLACES	REF	QTY	PART	REPLACES
1	2	2 0084	223 116 008	10	1	2 1494	223 116 149
2	1	2 1114	223 116 111	11	1	2 0134	223 116 013
3	1	2 1134	223 116 113	12	1	31128	223 091 112
4	1	2 1154	223 116 115	12	1	3759SAMK	223 091 113
5	2	2 2164	223 116 216	13	1	31127	223 091 111
6	1	2 2184	223 116 218	13	.1	37541AMK	223 091 110
7	1	2 0154	223 116 015	14	1	31125	FA 13060
8	1	3 9244	223 116 924	15	1	31124	FA 13061
9	1	2 2284	223 116 228	16	1	31123	FA 13062
9	1	2 2344	223 116 234	17	1	31122	FA 11956
10	1	2 2314	223 116 231	18	1	31121	FA 12802
10	1	2 1414	223 116 141	19	1	8 1114	223 202 111

*NOTE: There are additional parts provided in the kit to accommodate mechanism type OA-3A, B & C.



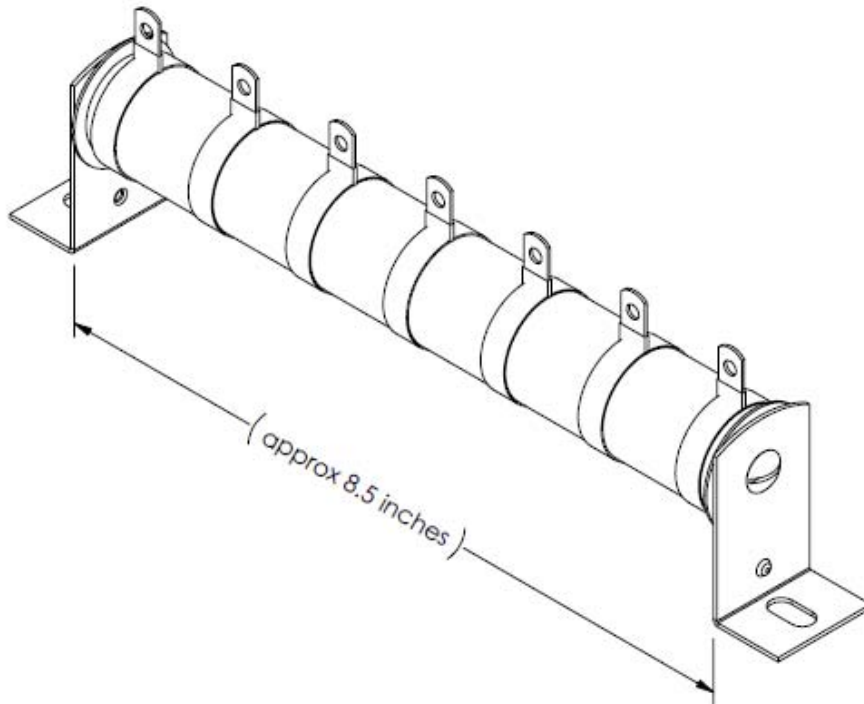
FC 10616 OA-3 MECHANISM

BREAKER SERVICE, INC.
1080 S. CYPRESS STREET, SUITE D
LA HABRA, CALIFORNIA 90631

PHONE: 800-426-5250
FAX: 800-267-7690

MECHANISM
GC 10616 OA-3
FC 10616 OA-3

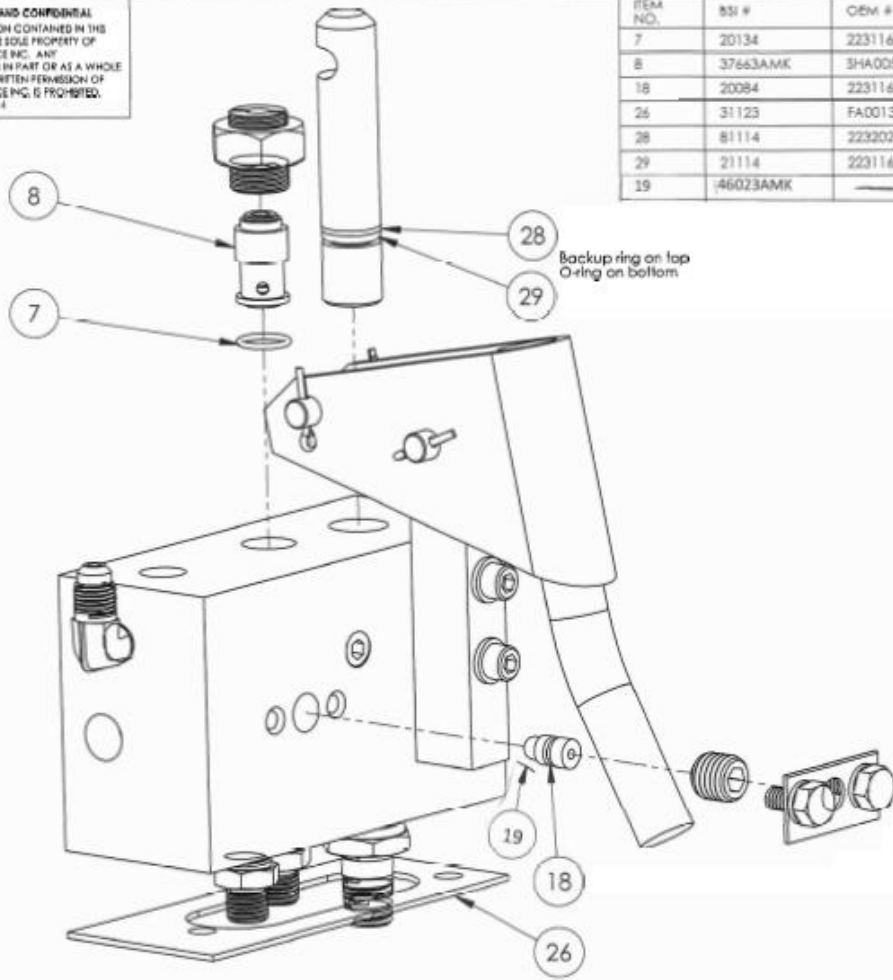
12308



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BREAKER SERVICE INC 800-826-5250 office 888-267-7690 fax		
Resistor, multi tap, from 5 to 10 ohms by 1 ohm increments. Used in various Fed Pacific, McGraw Edison, & Cooper circuit breaker mechanisms		
SIZE A	DWG. NO. 37626AMK	REV. 0
SCALE: NTS	Date: 01-06-2003	SHEET 1 OF 1

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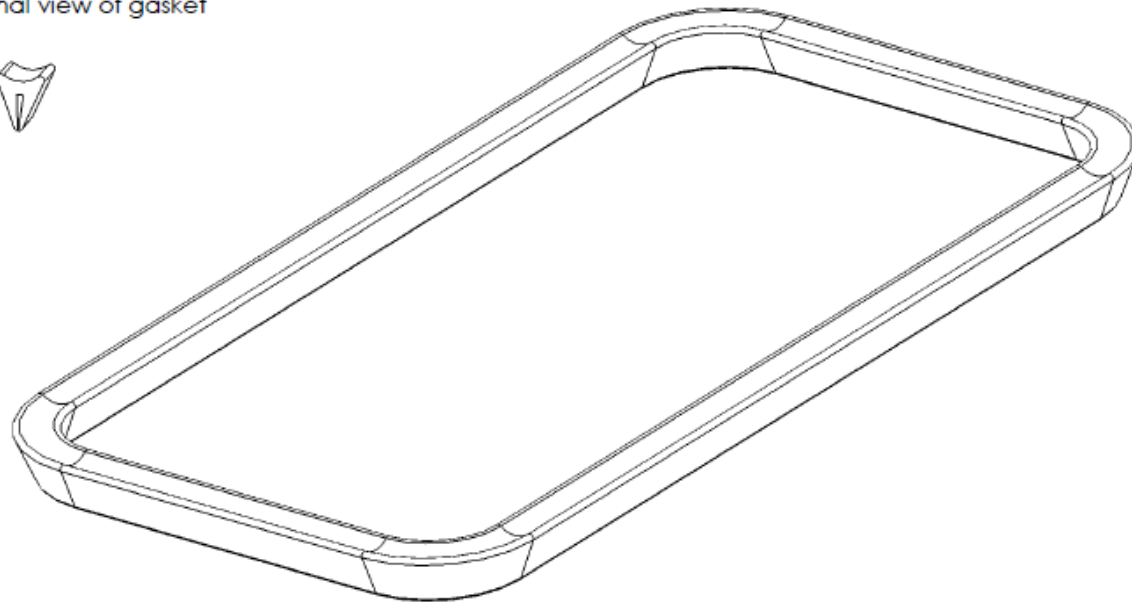
ITEM NO.	SSI #	QEM #	DESCRIPTION	QTY.
7	20134	223116013	"O" RING	1
8	37663AMK	3HA00504A00A	RELIEF VALVE ASSY	1
18	20084	223116008	"O" RING	1
26	31123	FA0013062	GASKET	1
28	81114	223202111	BACK-UP RING	1
29	21114	223116111	"O" RING	1
19	46023AMK		BALL BEARING	1

BREAKER SERVICE INC
 800-526-5250 office 888-267-7690 fax
 Kit to rebuild the manual hand
 pump and relief valve block for
 a McGraw Edison OA-3 mech.

REV. NO. **38405AMK**

SCALE 1:1 (IN) (DIM) SHEET 1 OF 1

Cross sectional view of gasket



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BREAKER SERVICE INC 800-826-5250 office 888-267-7690 fax		
Tank gasket for hydraulic reservoir on McGraw Edison type OA-3 circuit breaker operating mechanisms		
SIZE A	DWG. NO. 37270AMK	REV. 0
SCALE 1:1	Date: 02-03-2003	SHEET 1 OF 1